12 DEC 1977

MEMORANDUM FOR: Chief, Safety Branch, Office of Security

STATINTL FROM : [redacted]
Chief, Benefits and Services Division

SUBJECT : Potential Smoke Detector Risks

1. The attached article from the National Enquirer tells of a cancer risk from ordinary ionization-type smoke detectors. Since the EAA Store sold a large number of these devices, we may need to issue some form of warning if we can determine that a risk does exist.

2. It is requested that your office review available information on this subject and recommend an appropriate course of action for EAA.

[redacted] STATINTL

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STATINTL OP/BSD [redacted] mem (9 Dec 77)

# Some Home Smoke Detectors a Cancer Risk

**Millions of Americans face a serious cancer risk from ordinary home smoke detectors, top scientists warn.**

A carcinogenic element in the common ionization-type detector could definitely escape and infest the air in the home — with potentially deadly results.

"Ongoing studies indicate without question that americium 241 (a radioactive element) is a carcinogen which can trigger the formation of various types of tumors," declared Dr. Karl Z. Morgan, former director of the Oak Ridge National Laboratories health physics division in Tennessee. "If it is inhaled, studies indicate that it can lead to lung cancer."

There are about five million ionization-type smoke detectors now in use. Brand names include Home Sentry, Kwikset, Smoke Alarm, Smokey and First Alert. A thin gold foil is all that protects consumers from the americium 241.

"If the covering is damaged or destroyed by fire or debris, it could allow the americium to become airborne, where it could be inhaled as radioactive particles," said Dr. Morgan.

"Studies with similar elements have indicated that if even a fraction of a microcurie (one-one millionth of a radioactive unit) gets into the body, there is a 50 percent chance of cancer at the site of intake."

The ionization-type detectors which make up 65 percent of the detectors now on the market contain up to one full microcurie per detection unit, according to the Nuclear Regulatory Commission. A photoelectric-type smoke detector, also available, contains no americium — and therefore no radiation threat.

Americium is highly likely to cause bone cancer once it gets into the body. "It contributes to bone cancer the same way radium does," noted Dr. Edward A. Martell, a radiochemist with the National Center for Atmospheric Research in Boulder, Colo.

The Nuclear Regulatory Commission also recognizes the potential americium hazard. "We require labeling to the effect that people should return broken or discarded devices to the manufacturer," said agency spokesman Jim Hanchett. But there's no way to force the owner — who often isn't aware of the danger — to mail back his detector, admits Hanchett.

If the detectors are just discarded, there's a grave danger that children might tamper with them. "The gold foil covering is so thin it could be scratched open easily with a fingernail," noted Dr. Morgan.

"The benefits of fire protection far outweigh the risk," declared Bob McMillan, group manager for Teledyne Water Pik Corp., maker of the Smoke Alarm detector.

— LEONARD SANDLER